

Abstract

A method of controlling temperature of a heat source in contact with a heat exchanging surface of a heat exchanger, wherein the heat exchanging surface is substantially aligned along a plane. The method comprises channeling a first temperature fluid to the heat exchanging surface, wherein the first temperature fluid undergoes thermal exchange with the heat source along the heat exchanging surface. The method comprises channeling a second temperature fluid from the heat exchange surface, wherein fluid is channeled to minimize temperature differences along the heat source. The temperature differences are minimized by optimizing and controlling the fluidic and thermal resistances in the heat exchanger. The resistances to the fluid are influenced by size, volume and surface area of heat transferring features, multiple pumps, fixed and variable valves and flow impedance elements in the fluid path, pressure and flow rate control of the fluid, and other factors.